

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A digital document processing system, comprising
an application dispatcher for receiving a plurality of input bytestreams, each input bytestream representing source data corresponding to a separate, independent digital document in one of a plurality of predetermined data formats, and for associating each input bytestream with one of said plurality of predetermined data formats,
a plurality of document agents for interpreting said input bytestreams as a function of said associated predetermined data formats and for parsing the input bytestreams into streams of document objects representative of ~~internal representations of~~ primitive structures within the input bytestreams, and
a core document engine for a) converting a first set of document objects from a first of said parsed bytestreams into an internal representation data format; b) storing said converted first set of document objects in an internal representation; c) converting a second set of document objects from a second of said parsed bytestreams into the internal representation format; d) adding said converted second set of document objects to the stored internal representation, thereby creating a collective internal representation including content from each of the first and second bytestreams; and e) ~~said document objects into internal representation data representing the collective content of said input bytestreams in an internal representation data format and for~~ b) mapping converted document objects stored in said internal representation data ~~from each of the first and second bytestreams~~ to a-locations on a display.
2. (Currently Amended) A digital document processing system according to claim 1, further comprising a shape processor for processing said internal representation ~~data~~ to drive an output device independent of external document display applications.
3. (Currently Amended) A digital document processing system as claimed in claim 1, wherein ~~said source data defines the content and structure of a digital document~~ a digital document includes structured content, and wherein said internal representation ~~data describes said~~ includes first data structures for storing information related to the structure of the digital document in terms of document objects of a plurality of data types and parameters defining

properties of specific instances of the document objects, and second data structures for storing information about the data content contained in the digital content~~separately from said content.~~

4. (Cancelled)

5. (Currently Amended) A digital document processing system as claimed in claim 3, further including a library of objects types, said internal representation ~~data~~ being based on the content of said library.

6-7 (Cancelled)

8. (Currently Amended) A digital document processing system according to claim 1 ~~6~~, further ~~including comprising:~~

a parsing and rendering module adapted to generate an object and parameter based representation of a specific view of at least part of said collective internal representation based on a first control input to the parsing and rendering module; and

a shape processing module adapted to receive said object and parameter based representation of said specific view from said parsing and rendering module and to convert said object and parameter based representation into an output data format suitable for driving a particular output device independent of external display applications.

9. (Previously Presented) A digital document processing system according to claim 8, wherein said shape processing module processes said objects on the basis of a shape defining the shape of the object bounded by a boundary box, the data content of the object, and the transparency of the object.

10. (Original) A digital document processing system according to claim 8, wherein said shape processing module processes said objects on the basis of a shape defining the shape of the object bounded by the boundary box representative of a defined area on a display on which an object may be rendered.

11-13 (Cancelled)

14. (Currently Amended) A digital document processing system according to claim 1, further including a processor for compacting the collective internal representation data by combining document objects from the first bytestream with document objects from the second bytestream that have ~~having~~ similar attributes.

15–18 (Canceled)

19. (Original) A digital document processing system according to claim 1, having a platform adapted for being embedded into a device selected from the group consisting of a hand held computer, a mobile telephone, a set top box, a facsimile machine, a copier, an embedded computer system, a printer, an in-car system and a computer workstation.

20–21 (Cancelled)

22. (Original) A digital document processing system according to claim 1 wherein at least one of the document agents includes an export process for exporting data in a selected format.

Claims 23–25 (Cancelled)

26. (Currently Amended) A method according to claim ~~25~~ 43, wherein the ~~data source~~ bytestream is selected from the group consisting of a ~~data file~~, a byte stream generated from a peripheral device and a byte stream generated from a data file.

27–28 (Cancelled)

29. (Currently Amended) A method according to claim ~~28~~ 43, wherein the document is ~~mapping includes mapping identified data to a set of object types suitable for translating source data representative of content~~ selected from the group consisting of a digital document, an audio/visual presentation, a music file, an interactive script, a user interface file and an image file.

30. (Currently Amended) A method according to claim ~~28~~ 43, wherein a document object mapping includes mapping the identified data to a set of object types is selected from the group consisting of including a bitmap object ~~type~~, a vector graphic object ~~type~~, a video object-type, an animation ~~type~~, a button ~~type~~, a script, ~~type~~ and a text object ~~type~~.

31. (Currently Amended) A method according to claim ~~24~~ 43, wherein translating the ~~sources of data~~ bytestreams includes filtering portions of ~~source data~~ the bytestream to create a filtered internal representation of the ~~sources of data~~ bytestreams.

32. (Currently Amended) A method according to claim ~~24~~ 43, wherein translating the sources of data includes altering the first data structures to adjust the structure of the digital content.

33. (Currently Amended) A method according to claim ~~24~~ 43, wherein translating the sources of data includes the further act of substituting data content in the second data structures to thereby modify content presented within the internal representation.

34 (Currently Amended) A method according to claim ~~24~~ 43, wherein translating the sources of data includes translating the sources of data into a set of document objects of known object types, wherein a document object includes a set of parameters that define dimensional, temporal and physical characteristics of the document object.

35–39 (Cancelled)

40. (Currently Amended) A method according to claim ~~38~~ 44, wherein the output device is selected from the group consisting of a visual display, an audio speaker, a video player, a television display, a printer, a disc drive, a network, and an embedded display.

41. (Currently Amended) A system for interacting with content in a plurality of separate, independent digital documents, comprising
a plurality of document agents for converting content in each of the plurality of separate, independent ~~the~~ digital documents into a collective set of document objects including

~~representative of~~ internal representations of primitive structures identified in each of the digital documents, and

a core document engine for rendering said collective set of document objects to generate a display representative of the collective digital content,

a user interface for detecting input signals representative of input for modifying the content of the digital documents, and

a processor for changing the internal representations as a function of the input signals, to modify the display of the collective digital content.

42. (Original) A system according to claim 41, wherein the user interface includes an input device selected from the group consisting of a mouse, a touch pad, a touch screen, a joy stick, a remote control and a keypad.

43. (New) A method of digital document processing, comprising

receiving a plurality of input bytestreams, each input bytestream representing source data corresponding to a separate, independent digital document in one of a plurality of predetermined data formats,

associating each input bytestream with one of said plurality of predetermined data formats,

parsing the input bytestreams into streams of document objects representative of primitive structures within the input bytestreams as a function of said associated predetermined data formats

converting a first set of document objects from a first of said parsed bytestreams into an internal representation data format;

storing said converted first set of document objects in an internal representation,

converting a second set of document objects from a second of said parsed bytestreams into the internal representation format;

adding said converted second set of document objects to the stored internal representation, thereby creating a collective internal representation including content from each of the first and second bytestreams, and

mapping converted document objects stored in said internal representation from each of the first and second bytestreams to locations on a display.

44. (New) A method according to claim 43, wherein the first and second bytestreams represent digital documents having distinct data formats.
45. (New) A method according to claim 43 wherein the predetermined data formats includes one or more from the set comprising HTML, XML, Microsoft Word, PDF
46. (New) A method according to claim 43 further comprising processing said internal representation to drive an output device independent of external document display applications.
47. (New) A method according to claim 43 wherein each digital document includes structured content, and wherein said internal representation includes first data structures for storing information about the structure of the digital document in terms of document objects of a plurality of data types and parameters defining properties of specific instances of the document objects and second data structures for storing information about the data content contained in the digital content.
48. (New) A method according to claim 43 further comprising compacting the collective internal representation data by combining document objects from the first bytestream with document objects from the second bytestream that have similar style attributes.
49. (New) A method according to claim 43 further comprising compacting the collective internal representation data by combining document objects from the first bytestream with document objects from the second bytestream that have similar content.
50. (New) A system for interacting with content in a plurality of digital documents, comprising
- an application dispatcher for receiving a plurality of input bytestreams, each input bytestream representing source data corresponding to a separate, independent digital document in one of a plurality of predetermined data formats,
 - a plurality of document agents for parsing the input bytestreams into streams of document objects representative of primitive structures within the input bytestreams,

a core document engine for a) converting a first set of document objects from a first of said parsed bytestreams into an internal representation data format; b) storing said converted first set of document objects in an internal representation, c) converting a second set of document objects from a second of said parsed bytestreams into the internal representation format; d) adding said converted second set of document objects to the stored internal representation, thereby creating a collective internal representation including content from each of the first and second bytestreams; and e) mapping converted document objects stored in said internal representation from each of the first and second bytestreams to locations on a display;

a user interface for detecting an input signal representative of user input for modifying the content of one of the digital documents, and

a processor for changing the internal representation as a function of the input signal.

51. (New) A digital document processing system, comprising:

an application dispatcher for receiving a plurality of input bytestreams, each input bytestream representing source data corresponding to a separate, independent digital document in one of a plurality of predetermined data formats;

a plurality of document agents for parsing the input bytestreams into streams of document objects within the input bytestreams; and

a core document engine for a) converting a first set of document objects from a first of said parsed bytestreams into an internal representation data format; b) storing said converted first set of document objects in an internal representation, c) converting a second set of document objects from a second of said parsed bytestreams into the internal representation format; d) adding said converted second set of document objects to the internal representation, thereby creating a collective internal representation including content from each of the first and second bytestreams; and e) mapping, independent of any external document display applications, said collective internal representation to a single display window which concurrently displays at least part of each of the digital documents corresponding to the first and second bytestreams.

52. (New) A digital document processing system as claimed in claim 51, wherein said core document engine includes a parsing and rendering module adapted to i) receive a first view control input from user, and ii) alter the display of the collective representation based on the first view control input.

53. (New) A digital document processing system according to claim 1, wherein the first and second bytestreams represent digital documents having distinct data formats.